GOVERNMENT OF INDIA
ATOMIC ENERGY
LOK SABHA

UNSTARRED QUESTION NO:3898
ANSWERED ON:12.08.2015
Upgrading Uranium Reactor Kamini
Banerjee Shri Abhishek

Will the Minister of ATOMIC ENERGY be pleased to state:

(a)whether any proposal is being considered by the Government to upgrade 30-KW Uranium-233 reactor Kamini located at the Indira Gandhi Centre for Atomic Research, Kalpakkam;

(b)if so, the details thereof and if not, the reasons therefor;

(c)whether any long-term plan is being considered by the Government to introduce Uranium-233 in India; and

(d)if so, the details thereof and if not, the reasons therefor?

Answer

THE MINISTER OF STATE FOR PERSONNEL, PUBLIC GRIEVANCES & PENSIONS AND PRIME MINISTER'S OFFICE (Dr. JITENDRA SINGH) :

(a)No, Sir.

(b)Kalpakkam Mini Reactor (KAMINI) is an experimental reactor and it meets the objectives of R&D without upgradation.

(c)Yes, Sir.

(d)Research and Development on Thorium utilisation has been a high priority for the Department of Atomic Energy (DAE) right since its inception. On account of certain characteristics of Thorium, it is not possible to build a nuclear reactor using Thorium alone. It has to be converted into Uranium-233 in a reactor before it can be used as fuel. With this in view, a three-stage nuclear power programme, based on a closed nuclear fuel cycle has been chalked out. The three stage nuclear power programme aims to multiply the domestically available fissile resource through the use of natural Uranium in Pressurised Heavy Water Reactors (PHWRs), followed by use of Plutonium obtained from the spent fuel of Pressurised Heavy Water Reactors in Fast Breeder Reactors. Large scale use of Thorium will subsequently follow, making use of Uranium-233 that will be bred in Fast Breeder Reactors, when adequate nuclear installed capacity in the country has been built. Accordingly, the utilisation of Thorium as a practically inexhaustible energy source has been contemplated during the third stage of the Indian nuclear programme, which can be achieved after a few decades.

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